



BULLETIN

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May 2002

DIRECTOR'S COLUMN

Henry L. Green

Local Officials Attend Code Meeting

On January 17th I had the pleasure of presenting information to elected officials at the Michigan Township Association Annual Meeting in Grand Rapids. The program was designed to familiarize local officials with changes in construction codes in Michigan and how these changes impact local communities.

A review of how the single state codes came into being and what effect the codes have on local construction ordinances was the subject of extensive questions. Now, a community no longer needs to update local ordinances or to consider construction provisions beyond those contained in the Michigan codes.

Local officials were given a short introduction on the format of the codes and how appeals are handled at the local level and the opportunity for appeals to the State Construction Code Commission.

How local inspectors receive training and when training requirements must be met was outlined. Local officials learned that inspectors are now participating in training under a single set of construction standards rather than the multitude of codes previously in effect. This has resulted in the consolidation of training and more consistency in the uniform application of codes.

Local officials were advised of the development of a single code document

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Bureau Appoints Managers in the Office of Administrative Services, Building and Boiler Divisions

As indicated in earlier editions of the bulletin, the bureau has implemented a reorganization. As a result of the reorganization, the bureau has appointed Beth Aben as Director of the Office of Administrative Services and Larry Lehman as Chief of the Building Division.

Both Beth and Larry are long-term bureau employees. Beth most recently served as Executive Assistant to Henry Green while Larry was the Assistant Chief of the Plan Review Division.

Another recent appointment was that of William (Bill) Vallance as Assistant Chief in the Boiler Division. Mr. Vallance most recently served as the senior boiler inspector and has been with the division for 15 years.

Please join the bureau in welcoming these staff to their new positions.

Michigan Residential Code Shower Floor Liner Pitch

*by Robert G. Konyndyk, Chief
Plumbing Division*

The Plumbing Division has recently published Technical Bulletin No. 40 to resolve many installation questions regarding residential shower pan liners.

The Michigan Residential Code requires finished floor shower receptors to slope uniformly toward the drain in Section P2709.1. Section P2709.3 appears to suggest that the licensed plumber is responsible for the slope of the liner. Past practices have been that the tile contractor, in site built installations, completed the shower floor slope during their initial preparation. It's understood that placing lining materials directly on the floor (often wooden sub floor) prevents grout or sloping material make up from cracking and shrinking which compromises the base structure. Placing the lining material on a firm base when considering the lifetime length of the product is of the utmost importance. When the liner is placed on a flat surface the desired drainage into the weep holes will take place as proven by past practices.

To provide the consumer with the best possible installation, the finished floor shall slope uniformly toward the drain, however the plumber will not be required to pitch the lining material.

Technical Bulletins are available on the bureau's web site at www.cis.state.mi.us/bcc and provide greater detail.

Questions may be directed to Plumbing Division at 517/241-9330.



Director's Column, continued...

for one-and two-family dwellings that includes standards for building, electrical, mechanical, and plumbing disciplines.

The portion of the program on fees was interesting in that local officials were informed that fees must bear a reasonable relationship to the cost of services being provided in the administration and enforcement of the codes. Fees generated for code enforcement may not be used for other purposes.

Based on feedback from those in attendance, local officials were receptive to the information and supportive of local code programs. Many in attendance expressed a relief at the notion that codes are no longer required to be updated at the local level. Additionally, a number of local officials expressed a desire for more training on the adoption and enforcement of codes. Much can be learned by discussing the administration of codes with local code officials.

More information on the adoption of codes and the administration and enforcement of codes is found on the bureau's web site at www.cis.state.mi.us/bcc.

Smoke Alarms in Existing Dwellings

by Larry Lehman, Chief
Building Division

Many questions have been raised relative to Section R317.1.1 of the 2000 Michigan Residential Code (MRC). One question is whether minor alterations and repairs or additions to a residence, such as the examples listed below require smoke detectors to be installed as required for a new residence when permits are required.

Mechanical: Furnace, air conditioner, and hot water heater replacements.

Electrical: Service upgrades or minor wiring changes.

Plumbing: New garbage disposal, new plumbing fixtures.

Building: Replacing a porch, deck and sunroom additions.

Section R317.0 provides the building official some latitude to designate the level of compliance for smoke alarms in an existing residence undergoing an alteration, repair or addition. However, it is important to also examine the Stille-DeRossett-Hale Single State Construction Code, Act 230 of 1972 and the 2000 MRC Section R102.7 which provide for the legal occupancy of a residence to continue without change. Section R102.7.1 states in part "...additions, alterations, or repairs to any structure shall conform to that required for a new structure without requiring the existing structure to comply with all of the requirements of this code." This is the language the building official should primarily rely on for the level of compliance associated with smoke detector installation for an existing residence.

It is important to note that Act 230 and the 2000 MRC exempt ordinary repairs from permits. Also, the code shall not be retroactive. As an example, it is the opinion of this office that a home built to a previous edition of the code that now has to replace its furnace should not have to install smoke detectors as required for new residences. This determination would also be consistent for all of the previously listed examples.

Installing smoke detectors throughout a residence in accordance with Section R317.1.1 is warranted when bedrooms or levels of buildings are created.

Questions may be directed to Building Division at 517/241-9317.

Registered Inspectors and Approved Instructors

by Scott D. Fisher
Office of Local Government and Consumer Services

As you are aware, pursuant to the Building Official, Plan Reviewers and Inspector Registration Rules, education and training programs that were submitted after September 16, 1999, were approved until September 16, 2002. Notices were recently sent to all inspectors and instructors advising that all Education and Training Program approvals have been extended until September 16, 2003. Additionally, any programs submitted and approved after the notification was sent would be approved until September 16, 2003.

The extension of program approvals was granted to coordinate the approval and expiration of education and training programs with the promulgation of the Michigan codes.

It is the intent of the Construction Code Commission to update the current editions of the building, mechanical, and plumbing codes by October of 2003.

All technical programs submitted for approval prior to September 2003 should be based on the current codes.

Credit may not be granted for duplicate programs. Therefore, caution should be taken not to attend the same approved education and training program(s) before and after the inspector registration renewal date of September 16, 2002.

Please note: For Cycle 1 registrants, all programs attended prior to September 16, 2002, will be credited to the registration cycle ending September 16, 2002. Programs attended after September 16, 2002, will be credited to the next registration cycle.

If you have any questions, please contact the Office of Local Government and Consumer Services at (517) 241-9347.

Look for us at www.cis.state.mi.us/bcc.

BULLETIN

BUREAU OF
CONSTRUCTION
CODES

MICHIGAN DEPARTMENT
OF CONSUMER &
INDUSTRY SERVICES

The BULLETIN is a quarterly publication of the Bureau of Construction Codes within the Michigan Department of Consumer & Industry Services. The BULLETIN is published for the information of the 60,000 plumbers, electricians, mechanical contractors, boiler and elevator licensees, plan reviewers, building officials, inspector registrants, manufactured home communities, installer/servicers, and retailers throughout the state.

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Boiler Installation Clearance Drawing

by Robert J. Aben, Jr., Chief
Boiler Division

Since July 15, 1998, all permits for installation are required to be accompanied by drawings showing the installation configuration. The Boiler Division continues to receive many permits without the required drawing which causes a delay in the issuance of the permit.

The drawing or sketch need only be a bird's eye view of the installation showing the distance from other boilers or equipment. The installation must provide for access around the boiler to allow an inspector to make a proper inspection or to allow work by repair and maintenance personnel. Following is a reprint of the boiler rule addressing minimum clearances.

Rule 197. A minimum clearance of 24 inches shall be provided between a boiler, its controls, firing equipment, and appurtenances and the building walls and partitions or other boilers or machinery. A boiler installation with clearances of less than 24 inches between boilers may be approved by the chief inspector but only after his review and written approval of installation engineering drawings submitted to him before installation of such boilers. The applicant for deviation from the requirements of this rule shall be notified of approval or denial and if denied, the chief inspector shall indicate the reasons of such denial.

Questions may be directed to the Boiler Division at 517/241-9334.

Holiday Closings

State offices will be closed in observance of the following holidays:

May 27 - Memorial Day
July 4 - Independence day

Scheduled Board Meetings

MEETING	DATE	TIME	LOCATION
State Plumbing Board	June 4	10:00 a.m.	Okemos-Conf. Room 2
Board of Boiler Rules	June 11	9:30 a.m.	Okemos-Conf. Room 2
Manufactured Housing Commission	June 19	10:00 a.m.	Okemos-Conf. Room 3
Elevator Safety Board	June 21	9:30 a.m.	Okemos-Conf. Room 3
Electrical Administrative Board	June 21	9:30 a.m.	Okemos-Conf. Room 1
Board of Mechanical Rules	June 26	9:00 a.m.	Okemos-Conf. Room 3
Construction Code Commission	July 10	9:30 a.m.	Okemos-Conf. Room 3
Barrier Free Design Board	July 12	9:30 a.m.	Okemos-Conf. Room 1
State Plumbing Board	July 17	8:15 a.m.	Escanaba
Manufactured Housing Commission	July 31	10:00 a.m.	Okemos-Conf. Room 3
Electrical Administrative Board	August 16	9:30 a.m.	Okemos-Conf. Room 1

Okemos - 2501 Woodlake Circle, Okemos
Escanaba - Upper Peninsula State Fair Grounds

License Exam Schedule

EXAM	DATE	LOCATION	DEADLINE
Journeyman Electrician	June 18/19	Lansing	May 22
Master Electrician	June 20	Lansing	May 22
Elevator Contractor & Certificate-of-Competency	June 21	Okemos	May 31
Elevator Journeyperson	July 17	Okemos	June 28
Master & Journey Plumber	July 18	Escanaba	June 28
Mechanical Contractor	August 1	Escanaba	July 5
Journeyman Electrician	August 21	Lansing	July 25
Master Electrician	August 22	Lansing	July 25
Boiler Installer/Repairer	September 4/5	Okemos	August 5
Boiler National Board	September 4/5	Okemos	August 5
Master & Journey Plumber	September 11	East Lansing	August 23
Mechanical Contractor	September 18	Lansing	August 21

Dates and locations are subject to change.

The Installation of Water Meters In Manufactured Home Communities

by Robert G. Konyndyk, Chief
Plumbing Division

The Plumbing Division has recently published Technical Bulletin No. 41 to resolve many questions regarding the installation of water meters to individual existing manufactured homes in a licensed manufactured home community.

The Michigan Plumbing Code outlines the type of material and methods of installation throughout its document. Careful attention must be paid to the full open valves on each side of the meter and the backflow protection requirements. Hose connections not having acceptable materials and proper vacuum breaker protection shall be corrected.

A permit for the installation of water meters is required. Consideration of permit costs are based upon the ability to conduct numerous inspections in a close proximity similar to original underground park construction. It is intended that one base fee with a small unit park site fee, similar to individual fixtures, be assessed.

A licensed master plumber or a manufactured home installer/repairer may complete the installation.

Technical Bulletins are available on the bureau's web site at www.cis.state.mi.us/bcc and provide greater detail.

Questions may be directed to the Plumbing Division at 517/241-9330.

Installation Instruction

by Richard VanderMolen, Chief
Manufactured Housing and Subdivision
Control Division

Manufactured Housing Commission General Rule 214i requires an applicant for an installer and servicer license to complete department approved installation instruction during the current licensing year.

If the applicant is currently an installer and servicer, the installation instruction must be completed between October 1, 2001, and September 30, 2002, in order to renew a license for the October 1, 2002, through September 30, 2003, license year. If the application is for a new license, the installation instruction must be completed after September 30, 2001, but before the application is presented to the Manufactured Housing Commission for approval.

The installation instruction must be at least six hours long for both new and renewing applicants. In addition, the instruction for new applicants must include a general description of both installing a manufactured home and Michigan's law regarding manufactured home installation. The applicant must also pass a test on Michigan's law in order to be eligible for a license.

The installation instruction can be received from a manufactured home manufacturer or any individual or organization that provides instruction meeting the minimal requirements. One organization that sponsors qualified instruction is the Michigan Manufactured Housing Association (MMHA).

The MMHA sponsors two different types of instruction each year. The first meets the requirements for the instruction which must be completed by a new applicant. It is held quarterly and its content has remained essentially the same since its inception several years ago. The second type is designed for existing licensees and its content changes every year. The information provided in the second type of instruction is more advanced than that provided in the first type. An existing licensee is allowed to attend the initial instruction again but a new applicant is not allowed to attend the advanced. Several departmental employees

participate in the MMHA's installation instruction at the invitation of the MMHA.

The MMHA's schedule for the remainder of this license year includes new applicant instruction on July 16, 2002, and renewal applicant instruction on September 24, 25, and 26, 2002. If you are an installer and servicer who is interested in attending the MMHA's instruction, you may obtain more details and register by contacting the MMHA at 517/349-3300.

If you have questions about the requirement for installation instruction, contact the Manufactured Housing Division at 517/241-6300.

Elevator Rules Update

by Calvin W. Rogler, Chief
Elevator Safety Division

The Elevator Safety Division is in the process of updating the elevator rules to the most current safety standards. The committee is reviewing the Michigan Elevator rules and all standards used to regulate elevating devices in the state.

The American National Standard, **Safety Code for Elevators and Escalators**, currently in use is the American Society of Mechanical Engineers (ASME) A17.1-1993, with the 1994 addenda. The code will be updated to the **ASME A17.1-2000** edition of that standard.

In 1996 in an effort to harmonize the ASME A17.1 Code with the Canadian Code, CAN/CSA-B44 Safety Code for Elevators, a new ASME Main Committee on Platform Lifts and Stairway Chairlifts was formed. The CAN/CSA-B44 Code does not include platform lifts and stairway chairlifts, and the new committee was to remove them from the A17.1. The new Main Committee incorporated Parts XX and XXI, along with the appropriate cross-references in A17.1, in a new Standard, **Safety Standards for Platform Lifts and Stairway Chairlifts, A18.1**. During the review process the term "Wheelchair Lifts" was changed to "Platform Lifts". The American National Standards Institute approved this standard on June 21, 1999.

The Elevator Safety Division has been responsible for the regulation of platform lifts and stairway chairlifts using A17.1. Once the code is updated platform lifts and stairway lifts will be regulated by **ASME A18.1-1999, with the A18.1a-2000 Addenda, and A18.1a-2001 Addenda**.

The Elevator Safety Division is presently using the American National Standard, Safety Standard for Belt Manlifts, ANSI/ASME A90.1-1985. This will be updated to the latest edition, which is the **Safety Standards for Belt Manlifts, ASME A90.1-1997, including the ASME A90.1a-1999 Addenda, and ASME A90.1b-2001 Addenda**.

The American National Standard, Safety Requirements for Personnel Hoists, ANSI A10.4-1981 is the standard now used for personnel hoists. This will be updated to the **Safety Requirements for Personnel Hoists and Employee Elevators for Construction and Demolition Operations, ANSI A10.4-1990**. This is the latest edition of this standard available.

The Michigan Elevator Rules are also being reviewed to remove redundant or outdated rules, and to evaluate devices and conditions that pose safety concerns to the public. This will result in a substantial reduction in the total number of Michigan rules. It will also reflect rules that are more in line with the appropriate standards. One of the proposed changes would be the removal of the Barrier Free Lifting Device from the rules. The ASME A17.1-2000 addresses these types of devices in Part 5.2, Limited-Use/Limited-Application (LU/LA) Elevators. If the proposed change is approved, new installations of these types of devices would have to meet the requirements of the LU/LA elevator.

After committee work is finished in late spring, the bureau will hold a public forum. The rules will then be forwarded to the Legislative Service Bureau (LSB) and the Governor's Office of Regulatory Reform. After editing by LSB a public hearing will be scheduled.

Questions may be directed to the Elevator Safety Division at 517/241-9337.

Bureau Directory

Department of Consumer & Industry Services Bureau of Construction Codes

P.O. Box 30254 (Codes: general correspondence)
P.O. Box 30255 (Codes: permits, licenses, and other documents containing payments)
P.O. Box 30222 (Office of Local Government and Consumer Services)
P.O. Box 30703 (Manufactured Housing)
P.O. Box 30704 (Subdivision Control/Survey and Remonumentation Section)
Lansing, Michigan 48909
Fax Numbers: Administration - (517) 241-9570
Codes - (517) 241-9308
Office of Local Government and Consumer Services - (517) 241-6371
Manufactured Housing and Subdivision Control - (517) 241-6301
Web site: www.cis.state.mi.us/bcc

Administration (517) 241-9302
Office of the Bureau Director and Deputy Directors; legislation; rule promulgation; budget oversight; web development/updates; Construction Code Commission.

Office of Local Government and Consumer Services (517) 241-9347
Review of applications from local units of government to locally enforce state building, electrical, mechanical, and/or plumbing codes; complaints regarding local code enforcement, electricians, mechanical contractors, plumbers, and barrier free design requirements; complaints against manufactured housing communities, installer/servicers, retailers, and manufacturers; manufactured housing community and retailer audits; manufactured housing community ordinance and variance request reviews; inspector registration, training and educational requirements; instructor approvals for training and education.

Office of Management Services (517) 241-9313
Building, electrical, mechanical, and plumbing permits; electrical, mechanical, and plumbing license renewals; purchase of code books.

Boiler Division (517) 241-9334
Code questions; boiler installers, inspectors, and repairers licenses; boiler permits and inspections; complaints and reporting of boiler accidents; boiler invoices; purchase of boiler code books; Board of Boiler Rules.

Building Division (517) 241-9317
Code questions — i.e., residential, commercial, foundations, drywall, roofing, footings and foundations, snow loads, demolition, etc.; school construction inspections; building permit questions; building inspections; certificates of occupancy; manufactured housing community pre-licensing inspections.

Electrical Division (517) 241-9320
Code questions; electrical examinations and licenses; apprenticeship registration; electrical inspections; Electrical Administrative Board.

Elevator Division (517) 241-9337
Code questions; elevator examinations and licenses; elevator permits and inspections; purchase of elevator code books; complaints and reporting of elevator accidents; Elevator Safety Board.

Manufactured Housing and Subdivision Control Division
Manufactured Housing Program (517) 241-6300
Manufactured housing questions; Manufactured Housing Commission.

Subdivision Control Program (517) 241-6300
General questions; ensure orderly division of land; conduct final reviews of plat maps; administers statewide program of monumenting and remonumenting the original U.S. government public land survey property controlling corners.

Mechanical Division (517) 241-9325
Code questions — i.e., furnaces, HVAC (heating, and air conditioning), duct work, solar heating, refrigeration, underground tanks; Mechanical Contractor examinations and licensing; mechanical inspections; Board of Mechanical Rules.

Plan Review/Barrier Free Design Division
Plan Review (517) 241-9328
Plan review status, signature and seal requirements for plans; premanufactured construction requirements and premanufactured unit labels; manufactured housing community construction plans and permit approvals.

Barrier Free Design (517) 241-9300
Barrier free design questions; exception applications; Barrier Free Design Board.

Plumbing Division (517) 241-9330
Code questions — i.e., plumbing fixtures, water distribution, sanitary and storm lines; plumbing examination and licensing; apprenticeship registration; State Plumbing Board.

Office Locations

Administration, Office of Management Services, Boiler, Building, Electrical, Elevator, Mechanical, Plan Review/Barrier Free Design, and Plumbing Divisions are located at **2501 Woodlake Circle, Okemos.**

Manufactured Housing and Subdivision Control Division and Office of Local Government and Consumer Services are located at **6546 Mercantile Way, Lansing.**

Snow Loads

by Irvin J. Poke, Chief
Plan Review Division

In my article of November 2001 I ended with the following statement in bold face type. "It is critical to understand that the design methodology of multiplying the ground snow load by 0.7 for the design live load is no longer valid." I have received a number of calls indicating confusion regarding the meaning of this statement. The confusion comes from the fact that the 0.7 factor is in the current equation for computing the flat roof snow load.

In the BOCA National Building Code 1996 edition, the equation for the flat roof snow load was $P_f = C_e I P_g$ where P_f = the flat roof snow load C_e = the exposure factor, I = the importance factor and P_g = the ground snow load. There were three exposure factors 0.6, 0.7 and 0.9 with the default being 0.7. The importance factor for residential buildings was 1. Therefore, $P_f = 0.7 (1) (P_g)$ was the basis for most residential roofs.

Currently, the Michigan Building Code (MBC) requires that the flat roof snow load be computed by the equation $P_f = 0.7 C_e C_t I P_g$. In this equation the 0.7 has become a constant and the exposure factor has been redefined and may have a value greater than one. A new factor C_t , the thermal factor, is introduced that may have a value other than 1. The redefining of the exposure factor and the introduction of the thermal factor has a significant effect on the design load in certain cases.

The former article also pointed out that the flat roof snow load may not and usually is not the controlling load for the design. The unbalance, drift and any special loads must be evaluated as prescribed in the MBC, Chapter 16. The ending statement in November was intended to alert readers that there were other factors now in the equation that have a significant effect, and, there is more to the analysis than computing the flat roof snow load.

Customer-Owned Transformer Secondaries

by Stella L. Morris, Chief
Electrical Division

Since the adoption of the 1999 Michigan Electrical Code (Electrical Code Part 8 Rules, Incorporating the 1999 NEC), Section 240-21(c)(4)(b) has created conflicting views between enforcement agencies, contractors, and engineers.

Section 240-21(c)(4)(b) of the code references outside transformer secondary conductors. Obviously this would be a customer-owned transformer since the NEC does not cover utility installations. Section 240-21(c)(4)(b) of the 1999 NEC code book (**first printing**) reads as follows:

"The conductors terminate in an overcurrent device that will limit the load to the ampacity of the conductors. The overcurrent device shall be permitted to consist of not more than **six circuit breakers** or **six sets of fuses** grouped in one location." (emphasis added)

Section 240-21(c)(4)(b) of the 1999 NEC Handbook and code book (**second printing**) reads as follows:

"The conductors terminate at a **single circuit breaker** or a **single set of fuses** that will limit the load to the ampacity of the conductors. This single overcurrent device shall be permitted to supply any number of additional overcurrent devices on its load side." (emphasis added)

An errata was issued in February 1999 by NFPA which changed the language of that code section to read as printed in the handbook and second printing of the 1999 NEC. The code adoption of December 6, 1999, included the errata.

Projects with customer-owned transformers (primary metering) should receive a plan review and should be enforced as Article 240-21(c)(4)(b) reads in the handbook and second printing of the code.

Questions may directed to the Electrical Division at 517/241-9320.

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